

Customer No. 24498
Serial No. 09/804,554

PU010053

REMARKS

The office action allowed claims 1-4, 6-13, and 32 and rejected claims 14-17, 20, 21, 23-26, 29, and 33, as being unpatentable under 35 USC 103(a) over Tsuji et al., U.S. Pat. No. 5,111,297. In the previous office claims 1-4, 6-13, and 32 were rejected as unpatentable over Tsuji. In response, claims 1,3,4,6,7,9,10,11,13,14,23,25,26 are amended and new claims 34 and 35 are added.

The present office action amends allowed claims as well as rejected claims to make the distinctions between applicant's invention and the disclosure of Tsuji clear, without unduly narrowing applicant's claims. Therefore, reconsideration of the amended claims is requested in accordance with the remarks presented herein.

Claim 1 Claim 1 recites a method for multiplying the frame rate of an input video signal. The method comprises steps of, inter alia, "delaying successive respective lines of said input video signal to provide a first signal delayed with respect to said input video signal ", and "speeding up said successive respective lines of said input video signal to provide a second signal delayed with respect to said input video signal "

Thus it is clear from applicant's language that the "speed up" memory described by applicant performs a "speed up" function and the "delay memory" described by applicant performs a "delay" function. In contrast, memories 21 and 22 of Tsuji are frame memories which both having the same timing of input with respect to output signal.

Further, both the speed up memory and the delay memory of applicant's claims operate on the same input video signal. Further, applicant's delay memory provides a first signal delayed with respect to the input signal. At the same time, applicant's speed up memory provides a second signal speeded up with respect to the input signal. There is no teaching in Tsuji that memories 21 and 22 provide such different functions nor do they provide different first and second signals. There is no teaching or suggestion in Tsuji that one of the memories provides an output speeded up with respect to the input while the other memory provides an output delayed with respect to the same input signal. The first and second output signals from these memories, therefore, have different timing relationships to the input signal. This is not the case with memories 21 and 22 of Tsuji.

Customer No. 24498
Serial No. 09/804,554

PU010053

Further, assuming, arguendo, that line memory 23 is taken to correspond to applicant's delay (or speed up) memory, it is clear that memory 23 of Tsuji does not operate on the same signal as memory 21 or 22 and therefore memory 23 cannot correspond to either of applicant's claimed memories.

The examiner has noted that "reading the same video signal twice is equal to speeding up the video signal, i.e. multiplying the frame or field rate of the input video signal." In making this argument the examiner recognizes that memory 21 and memory 22 each have the same video signal as outputs and therefore no disclosure that they have different speeds with respect to their inputs. The examiner seems to suggest the speeding up is accomplished instead by switching between the two memory outputs. However, this hypothetical approach does not provide either memory with a speeded up output with respect to that memory's input. Instead the speeded up signal can be seen only at the output of the hypothetical switch which must switch between the outputs of two memories.

In applicant's claimed invention, the speed up memory provides an output signal that is speeded up with respect to the input signal of the same memory. Neither the teachings of Tsuji, nor the hypothetical circuit proposed by the examiner, teach or suggest applicant's claimed feature of: "delaying successive respective lines of said input video signal to provide a first signal delayed with respect to said input video signal ", and "speeding up said successive respective lines of said input video signal to provide a second signal delayed with respect to said input video signal ".

Further, Tsuji, lacks any disclosure that could correspond to applicant's claimed "third video signal". Further, Tsuji lacks any disclosure that could correspond to applicant's claimed step of "alternately supplying lines of said second video signal and lines of said third video signal to a display."

Claim 9. Claim 9 recites a method for multiplying the frame rate of a video signal comprising the steps of, inter alia, "delaying lines of said input video signal for a time less than one a frame period to provide a first video signal" and "speeding up said lines of said input video signal to provide a third video signal" and further, "alternately supplying lines of said second video signal and lines of said third video signal to a display."

For the reasons cited above with respect to claim 1 Tsuji lacks any teaching or suggestion of applicant's claim 9.

Customer No. 24498
Serial No. 09/804,554

PU010053

Claim 14. Considering claim 14, the Office Action states "feature a) a delay memory and a first speed up memory for receiving said input video signal, is met by, second frame memory 22 and first frame memory 21, of Fig. 6 of the cited reference; (see also disclosure on col. 6, lines 48-52).

For the same reasons cited with respect to claim 1 Tsuji neither teaches, nor suggests the features of applicant's claim 14.

Claim 23. For the same reasons cited above with respect to claim 1, Tsuji lacks disclosure or suggestion of the features of applicant's claim 23.

Accordingly, Applicant respectfully requests the withdrawal of the rejections under 35 U.S.C. § § 103(a) and allowance of the claims as amended herein. If, however, the Examiner is of the opinion that such can not be taken, the Examiner is invited to telephone the undersigned attorney at (609) 734-6892, so that a mutually convenient date and time for a telephonic interview may be scheduled.

The outstanding Office Action has a period for response which expired on Aug 20, 2005. The Applicant requests that this period for response be extended to expire on November 20, 2005. The extension fee for filing a response within three months after the end of the shortened statutory period should be charged to Deposit Account 07-0832.

Respectfully submitted,
Donald Henry Willis

By: 
Christine Johnson
609-734-6892

THOMSON Licensing, Inc.
P. O. Box 5312
Princeton, NJ 08543-5312

Date: Nov. 19, 2005